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BULLETIN

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# Philippine Basidiomycetes—IV

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The following pages are presented in continuation of papers already published* on the basidiomycetous flora of the Philippine Archipelago. The fungous flora of the tropics is proving to be much more extensive than had previously been imagined, and the range of many species found to be much wider than formerly supposed. In a few instances species already reported from the Islands have been included for the sake of correction in name, extension of synonymy, and distribution. The value of range-notes is becoming more and more evident when the extension rather than the diminishing area of habitats is noticed. No new species will be found described in this paper, a fact which will doubtless be interpreted by some as a loss of golden opportunity. The identification of species already described and but imperfectly known seems to the writer more important than searching for minor differences as an excuse for creating new plant names and more confusion.

## POLYPOREAE

### Polyporus Micheli

Polyporus gilvus (Schwein.) Fr. Elench. Fung. 104. 1828.

*Boletus gilvus* Schwein. Syn. Fung. Carol. 897. 1822.

*Boletus impuber* Sowerb. Engl. Fungi. *pl. 195*. 1799.

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* Additions to the basidiomycetous flora of the Philippines. Philip. Jour. Sci. **8**: (Bot.) 299–309. *pl. 8–10*. 1913; Philippine Basidiomycetes—II. Philip. Jour. Sci. **9**: (Bot.) 235–255. *pl. 2*. 1914; Philippine Basidiomycetes—III. Bull. Torrey Club **45**: 451–469. *pl. 15*. 1918.

[The Bulletin for October (**48**: 263–284. *pl. 4*) was issued December 31, 1921.]

LUZON: Province of Laguna, San Pablo, March, 1913, *P. W. Graff, Bur. Sci. 21052*, on decaying log.

A fungus of rather general tropical, and warm north temperate distribution.

POLYPORUS MARIANNUS Pers.; Gaudichaud, Bot. Voy. Uranie 173. 1826.

*Polyporus anebus* Berk. Jour. Bot. **6**: 504. 1847.

LUZON: Province of Laguna, Los Baños, October, 1912, *Baker 297*, growing on decaying wood in the forest.

This species was first described by Persoon from material collected by Gaudichaud-Beaupré, of the Freycinet Expedition, on his visit to Guam in the Marianne Islands during the month of March, 1819. It has been considered by Schumann and Lauterbach* as a synonym of *Polyporus Kamphoveneri*, and by Murrill† as identical with *P. corrugatus*, originally described by Persoon from material collected at the same locality and time. It seems, however, that the material preserved in the Paris Museum tallies more closely with Berkeley's species, *P. anebus*, from Ceylon than with either of these two.

As far as at present known the species range includes Africa, Ceylon, Japan and numerous islands of the Pacific.

POLYPORUS OSTREIFORMIS Berk. Jour. Linn. Soc. Bot. **16**: 46. 1878.

LUZON: vicinity of Manila, October, 1912, *P. W. Graff, Bur. Sci. 16795*, growing from a wound on *Enterolobium Saman* (*Pithecolobium*).

This collection is of interest as being the first made since the type material was gathered by the "Challenger Expedition" in February, 1875. The color of both upper and lower surface is a grey-white and the fungus has a slightly foetid odor when fresh.

The species has been collected only in the Philippines.

POLYPORUS RHODOPHOEUS Lév. Ann. Sci. Nat. Bot. III. **2**: 190. 1844.

*Polyporus cinereo-fuscus* Curr. Ind. Fung. 142. 1874.

*Polyporus zonalis* Berk. var. *semilaccatus* Berk. Jour. Linn. Soc. Bot. **16**: 46. 1878.

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* Die Flora der Deutschen Schutzgebiet in der Südsee, 1–613. *pl. 1–22.* 1901.

† Bull. Torrey Club **34**: 468. 1907.

*Fomes semilaccatus* Berk. Grevillea **15**: 22. 1886.

*Coriolopsis semilaccata* Murr. Bull. Torrey Club **34**: 466. 1907.

LUZON: Province of Laguna, Mount Maquiling, February, 1912, *P. W. Graff*, *Bur. Sci. 15936*, on decaying tree branches.

A fungus of very general tropical distribution. It is found both in the American and Asiatic tropics and on the islands of the Pacific.

POLYPORUS RUBIDUS Berk. Jour. Bot. **6**: 500. 1847.

LUZON: Province of Laguna, Mount Maquiling, February, 1912, *P. W. Graff*, *Bur. Sci. 16024*, on fallen and decaying timber.

This species is closely related to *Fomes roseus* (Alb. & Schw.) Cooke, which appears to be of a much broader tropical distribution. It may be that the latter is but a perennial form of the present species, a condition induced by certain tropical environmental factors and occurring in a number of other tropical forms.

Collected previously on the island of Ceylon.

POLYPORUS ZONALIS (Konig) Berk. Jour. Bot. **6**: 504. 1847.

*Boletus zonalis* Konig, Ann. Mag. Nat. Hist. **10**: 375. *pl. 10*, *f. 5*. 1846.

*Polyporus plumbeus* Lév. Ann. Sci. Nat. Bot. III. **5**: 136. 1846.

*Polyporus rufo-pictus* Berk. & Curt. Grevillea **15**: 23. 1886.

LUZON: vicinity of Manila, August, 1913, *Sanchez 29*.

Reported as having been collected in Cuba, Guiana, Java, and Ceylon.

### GANODERMA Karsten

GANODERMA AMBOINENSE (Lam.) Pat. Bull. Soc. Myc. Fr. **5**: 70. 1889.

*Fungus digitatus* Rumph. Herb. Amb. **6**: 128. *pl. 57*, *f. 2*, *3*. 1755.

*Fungus elatus-coclearis* Rumph. Herb. Amb. **6**: 128. *pl. 57*, *f. 1*. 1755.

*Agaricus amboinensis* Lam. Enc. Méth. Bot. **1**: 49. 1783.

*Polyporus japonicus* Thunb. Flor. japon. 348. 1784. Not Fries.

*Polyporus amboinensis* Fr. Syst. Myc. **1**: 354. 1821.

*Polyporus fornicatus* Fr. Epicr. Myc. 443. 1836.

*Polyporus lingua* Nees, Nov. Act. Acad. Nat. Cur. **13**: 15. *pl. 3*. 1837.

*Polyporus gibbosus* Nees, Nov. Act. Acad. Nat. Cur. **13**: 19. *pl. 5.* 1837.

*Polyporus coclear* Nees, Nov. Act. Acad. Nat. Cur. **13**: 20. *pl. 6.* 1837.

*Fomes lingua* Sacc. Syll. Fung. **6**: 156. 1888.

*Ganoderma amboinense* forma *lingua* Pat. Philip. Jour. Sci. **10**: (Bot.) 96. 1915.

LUZON: Province of Laguna, Mount Maquiling, April, 1913, *P. W. Graff*, *Bur. Sci. 21014*, on decaying log at 500 m. elevation. POLILLO: Province of Tayabas, Mount Malulud, August, 1909, *C. B. Robinson*, *Bur. Sci. 9101*, at an elevation of 300 m.; same locality, October–November, 1909, *R. C. McGregor*, *Bur. Sci. 10534*.

This fungus is so variable in the shapes it may assume that it is not surprising the earlier workers described it under a number of names. The writer has seen it growing in a great variety of forms, varying from those having a pileus of considerable size and almost lacking a stipe to forms growing from cracks and holes of decaying logs which had a long slender stipe and a very small fruiting end of no greater diameter than the stipe itself. Branching forms also are occasionally found. An interesting example of one of these branched specimens was found in a Negrito village by one of the Jesuit Fathers, and brought by him to Manila. The specimen had developed five branches and the similarity in shape to a hand was very striking. At the point of branching the fungus had spread in such a manner as to resemble the palm, while the five branches were each tipped with fruiting surfaces, which being lighter in color thus formed the finger nails. The natives of the village had found this specimen in the forest and brought it in on their return. Such a remarkable thing as a hand reaching out of a tree was to them *anting-anting* or supernatural, and the object was being worshiped by these superstitious people.

Such specific names as have been given to this plant at various times, as *digitatus*, *elatus-coclearis*, *coclear*, and *lingua*, give some suggestion of the shapes the plant may assume. It is no wonder that, without available material for comparison, botanists of different countries should each have described this under his own name.

This species has been found in the tropics of South America, the Pacific islands, and Japan.

GANODERMA ELMERIANUM (Murr.) Sacc. & Trott.; Saccardo, Syll. Fung. **21**: 305. 1912.

*Amauroderma Elmerianum* Murr. Bull. Torrey Club **34**: 475. 1907.

LUZON: Province of Bataan, Mount Mariveles, November, 1904, *Elmer 6906*. LEYTE: Palo, January, 1906, *Elmer 7210*, on dead and decaying tree stumps.

As yet only reported from the Philippines.

**Ganoderma leptopum** (Pers.) comb. nov.

*Polyporus leptopus* Pers.; Gaudichaud, Bot. Voy. Uranie 169. *pl. 2, f. 2.* 1826.

*Polyporus umbraculum* Fr. Elench. Fung. 74. 1828. Not Thüm.

*Fomes umbraculum* Sacc. Syll. Fung. **6**: 159. 1888.

*Ganoderma umbraculum* Pat. Bull. Soc. Myc. France **5**: 75. 1889.

*Ganoderma subrugosum* Bres. & Pat. Bull. Soc. Myc. France **5**: 77. *pl. 10, f. 1.* 1889.

*Ganoderma Curranii* Murr. Bull. Torrey Club **35**: 411. 1908.

This species was first collected in the Philippines by Dr. H. M. Curran in the forest on Mount Mariveles, Bataan Province, Luzon, and described as a new species, *Ganoderma Curranii*, by Murrill. The fungus was originally described by Persoon from material collected by Gaudichaud-Beaupré on the island of Rawak, and shortly after redescribed by Fries from material collected by Afzelius in Sierra Leone. Later Bresadola and Patouillard described and figured the species from Samoan material and suggested its possible identity with *Polyporus rugosus* var. *guineensis* Fr. The plates of both Persoon and Patouillard give an excellent idea of the fungus, which belongs to the *Amauroderma* section of the genus *Ganoderma*.

GANODERMA TORNATUM (Pers.) Bres. Hedwigia **53**: 55. 1912.

*Polyporus tornatus* Pers.; Gaudichaud, Bot. Voy. Uranie 173. 1826.

*Polyporus australis* Fr. Elench. Fung. 108. 1828.

*Fomes australis* Cooke, Grevillea **14**: 18. 1885.

*Ganoderma australe* Pat. Bull. Soc. Myc. Fr. **5**: 71. 1889.

*Elfvingia tornata* Murr. Bull. Torrey Club **30**: 301. 1903.

LUZON: Province of Nueva Vizcaya, vicinity of Dupax, March–April, 1912, *R. C. McGregor, Bur. Sci. 14376*, on decaying timber; Province of Laguna, Mount Maquiling, February, 1912, *W. H. Brown, Bur. Sci. 16033, 16039.*

This species is of general tropical distribution, being found in both the American and Asiatic tropics.

**Ganoderma tornatum** var. **subtornatum** (Murr.) comb. nov.

*Ganoderma subtornatum* Murr. Bull. Torrey Club **34**: 477. 1907.

LUZON: Province of Laguna, Mount Maquiling, February, 1912, *P. W. Graff, Bur. Sci. 16025.*

As yet this variety has been reported only from the Philippines, and has been collected there only on the islands of Luzon and Leyte. The type was found on the Lamao River, Province of Bataan, by R. S. Williams in 1903. The variety differs from the species in the greater amount of resinous material in its composition, hardly a specific distinction though causing a slight difference in the appearance of its texture.

## FOMES Fries

FOMES EXOTOPHRUS Berk. Jour. Linn. Soc. Bot. **16**: 49. 1878.

LUZON: Province of Laguna, Mount Maquiling, February, 1912, *P. W. Graff, Bur. Sci. 16009*, also April 12, 1913, *P. W. Graff, Bur. Sci. 21031*, on fallen tree branches at 150 m. elevation.

This species was described from material collected in the Admiralty Islands by the Challenger Expedition and is still known only from those islands and the Philippines.

FOMES ENDOTHEIUS (Berk.) Sacc. Syll. Fung. **6**: 187. 1888.

*Polyporus endothejus* Berk. Jour. Linn. Soc. Bot. **16**: 47. 1878.

*Pyropolyporus endotheius* Murr. Bull. Torrey Club **34**: 478. 1907.

CULION: December, 1902, *Merrill 3575.*

Originally described by Berkeley from Philippine material collected by the Challenger Expedition in 1875, and as yet not found outside these islands.

FOMES LAMAENSIS (Murr.) Sacc. & Trott; Saccardo, Syll. Fung. **21**: 287. 1912.

*Pyropolyporus lamaensis* Murr. Bull. Torrey Club **34**: 479. 1907.

*Pyropolyporus Williamsii* Murr. Bull. Torrey Club **34**: 479. 1907.

*Fomes Williamsii* Sacc. & Trott.; Saccardo, Syll. Fung. **21**: 289. 1912.

*Phellinus Williamsii* Pat. Leafl. Philip. Bot. **6**: 2249. 1914.

LUZON, Province of Tayabas, Kabibihan, March, 1911, *F. W. Foxworthy, Bur. Sci. 13155*, on a decaying log.

Of general distribution in the Philippine Islands but, as yet, not reported from elsewhere.

FOMES LINEATUS (Pers.) Graff, Mycologia **9**: 10. 1917.

*Polyporus lineatus* Pers.; Gaudichaud, Bot. Voy. Uranie 174. 1826.

*Polyporus fastuosus* Lév.; Gaudichaud, Bot. Voy. Bonite **1**: 180. 1846.

*Fomes fastuosus* Cooke, Grevillea **14**: 18. 1886.

LUZON: Province of Nueva Vizcaya, vicinity of Dupax, March–April, 1912, *R. C. McGregor, Bur. Sci. 14364;* Province of Bataan, Lamao, November, 1908, *H. M. Curran, For. Bur. 15568.* MINDANAO: Lake Lanao, Camp Keithley, June–July, 1907, *Mary S. Clemens.*

The name *Pyropolyporus fastuosus* as published by Murrill* from Philippine material was applied to *Fomes spadiceus* (Berk.) Cooke instead of to *F. fastuosus* (Lév.) Cooke, as is shown by the duplicate material in the herbarium of the Bureau of Science, Manila. Because of this *Pyropolyporus fastuosus* becomes a synonym of *Fomes spadiceus* rather than of *Fomes lineatus.* Both species of fungus are very common in the Philippines.

Collected in the Philippines, the Moluccas, the Federated Malay States, and the island of Guam.

**Fomes Merrittii** (Murr.) comb. nov.

*Tyromyces Merrittii* Murr. Bull. Torrey Club **35**: 406. 1908.

*Polyporus Merrittii* Sacc. & Trott.; Saccardo, Syll. Fung. **21**: 278. 1912.

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* Bull. Torrey Club **34**: 479. 1907.

LUZON: Province of Laguna, Mount Maquiling, November, 1907, *H. M. Curran & M. L. Merritt, For. Bur. 8939*, on dead wood, host species undetermined.

This species belongs to the genus *Fomes* rather than to *Polyporus*, as considered by Saccardo and Trotter.

As yet reported only from the Philippine Islands.

FOMES PECTINATUS (Klotz.) Gillet, Champ. France **1**: 686. 1878.
*Polyporus pectinatus* Klotz. Linnaea **8**: 485. 1833.
*Polyporus Haskarlii* Lév. Ann. Sci. Nat. Bot. III. **2**: 190. 1844.
*Polyporus pullus* Mont. & Berk. Jour. Bot. **3**: 332. 1844.
*Fomes pullus* Cooke, Grevillea **14**: 19. 1885.
*Pyropolyporus pectinatus* Murr. Bull. Torrey Club **34**: 479. 1907.

LUZON: Province of Laguna, Mount Maquiling, February, 1912, *P. W. Graff, Bur. Sci. 15931, 16011;* Province of Bataan, Lamao, September, 1907, *H. M. Curran, For. Bur. 7520.*

Collected in North America, Australia, and the East Indies.

FOMES ROSEO-ALBUS (Jungh.) Bres. Ann. Myc. **8**: 587. 1910.
*Poria roseo-alba* Jungh. Ann. Sci. Nat. Bot. III. **2**: 194. 1844.
*Polyporus roseo-albus* Jungh. Plant. Java Crypt. 43. 1845.
*Fomes mortuosus* Fr. Nov. Symb. Myc. 64. 1851.
*Polyporus endapalus* Berk. Jour. Linn. Soc. Bot. **13**: 163. 1873.
*Polyporus caliginosus* Berk. Jour. Linn. Soc. Bot. **16**: 46. 1878.
*Pyropolyporus caliginosus* Murr. Bull. Torrey Club **34**: 478. 1907.
*Coriolopsis Copelandii* Murr. Bull. Torrey Club **35**: 392. 1908.
*Polystictus Copelandii* Sacc. & Trott.; Saccardo, Syll. Fung. **21**: 322. 1912.

MINDANAO: District of Davao, Davao, March, 1904, *Copeland 714* (type of *Coriolopsis Copelandii*); Todaya, April, 1904, *Copeland 1214.*

Of general distribution through the Asiatic tropics and the Pacific islands. Originally described from Javan material.

## POLYSTICTUS Fries

POLYSTICTUS AFFINIS (Nees) Fr. Nov. Act. Reg. Soc. Sci. Ups. III. **1**: 75. 1855.

*Polyporus affinis* Nees, Nov. Act. Acad. Nat. Cur. **13**$^1$: 18. *pl. 4, f. 1.* 1826.

*Polyporus lateralis* Pers.; Gaudichaud, Bot. Voy. Uranie. Sec. M. 1826.

LUZON: Province of Laguna, Mount Maquiling, February, 1912, *P. W. Graff, Bur. Sci. 15954*, on fallen dead branches; Province of Nueva Vizcaya, vicinity of Dupax, March–April, 1912, *R. C. McGregor, Bur. Sci. 14367*, on decaying logs.

This species belongs to the "*Polystictus perula* group" and, with *P. xanthopus*, *P. luteus*, *P. macroloma*, *P. flabelliformis* and several others, goes to make up a series which is much confused in the literature of tropical fungi. Fortunately, however, while this confusion exists in the identification of these species, none of them are overburdened with synonyms-

Of very common distribution throughout the Asiatic tropics and the East Indies.

POLYSTICTUS BATAANENSIS (Murr.) Sacc. & Trott.; Saccardo, Syll. Fung. **21**: 322. 1912.

*Coriolopsis bataanensis* Murr. Bull. Torrey Club **35**: 393. 1908.

LUZON: Province of Bataan, Mount Mariveles, January, 1904, *Copeland 143*, on dead tree branches at 230 m. elevation.

Reported, as yet, only from the Philippines.

POLYSTICTUS CALLIMORPHUS (Lév.) Sacc. Syll. Fung. **6**: 277. 1888.

*Polyporus callimorphus* Lév. Ann. Sci. Nat. Bot. III. **5**: 133. 1846.

LUZON: Province of Bataan, Mount Mariveles, November, 1912, *P. W. Graff, Bur. Sci. 19105*, on a decaying log at the elevation of 350 m.

Previously collected in Madagascar.

**Polystictus caperatus** (Berk.) comb. nov.

*Polyporus caperatus* Berk. Ann. Mag. Nat. Hist. **3**: 391. 1839.

*Trametes dibapha* Berk. Vidensk. Meddel. 32. 1879.

*Coriolopsis caperata* Murr. N. Am. Flora **9**: 77. 1908.

MINDANAO: District of Davao, Mount Apo, April, 1904, *Copeland 1178*.

Of very general tropical distribution. Reported from the West Indies, Central America, South America and tropical Asia and Africa.

**Polystictus Elmerianus** (Murr.) comb. nov.

*Inonotus Elmerianus* Murr. Bull. Torrey Club **34**: 471. 1907.

*Polyporus Elmerianus* Sacc. & Trott.; Saccardo, Syll. Fung. **21**: 274. 1912.

LUZON: Province of Bataan, Mount Mariveles, November, 1904, *Elmer 6942*, on dead and decaying logs.

Thus far reported only from the Philippines.

POLYSTICTUS FLABELLIFORMIS (Klotz.) Cooke, Grevillea **14**: 78. 1886.

*Polyporus flabelliformis* Klotz. Linnaea **8**: 483. 1833.

LUZON: Province of Laguna, Mount Maquiling, February, 1912, *P. W. Graff*, *Bur. Sci. 15933*, on fallen and decaying timber.

This is the second collection reported from the Philippines. The first was made by Warburg, on the island of Mindanao, in 1888. This species has also been collected in Ceylon and the East Indies.

**Polystictus nigromarginatus** (Schwein.) comb. nov.

*Boletus hirsutus* Wulf.; Jacquin, Collect. **2**: 149. 1788. Not Scop.

*Boletus nigromarginatus* Schwein. Syn. Fung. Carol. 72. 1818.

*Polyporus hirsutus* Fr. Syst. Myc. **1**: 367. 1821.

*Coriolus nigromarginatus* Murr. Bull. Torrey Club **32**: 649. 1906.

LUZON: Province of Rizal, Antipolo, *H. M. Curran*, *For. Bur. 7042*. Mindanao, District of Davao, Lake Lanao, Camp Keithley, June–July, 1907, *Mary S. Clemens*.

Wulfen's name being preoccupied by that of Scopoli, Schweinitz's name must be used for this species.

A species of very general distribution.

POLYSTICTUS OCCIDENTALIS (Klotz.) Fr. Nov. Symb. Myc. 90. 1851.

*Polyporus occidentalis* Klotz. Linnaea **8**: 486. 1833.

*Trametes lanata* Fr. Epicr. Myc. 490. 1838.

*Trametes occidentalis* Fr. Epicr. Myc. 491. 1838.

*Trametes Wahlbergii* Fr. Fungi Natal. 11. 1848.

*Trametes scalaris* Fr. Fungi Natal. 12. 1848.

*Polyporus scorteus* Fr. Nov. Symb. Myc. 89. 1851.

*Trametes devexa* Berk. Jour. Linn. Soc. Bot. **13**: 165. 1873.

*Polyporus illotus* Kalchbr. Grevillea **10**: 102. 1882.

*Coriolopsis occidentalis* Murr. Bull. Torrey Club **32**: 358. 1905.

LUZON: vicinity of Manila, August, 1912, *Sanchez 28*.

That this fungus is of very general tropical distribution is shown by the fact that it has been so variously described from such widely separated localities as Brazil, Guiana, St. Vincent, Natal, British India, Ceylon, and the East Indies.

**Polystictus Ramosii** (Murr.) comb. nov.

*Hapalopilus Ramosii* Murr. Bull. Torrey Club **35**: 400. 1908.

*Polyporus Ramosii* Sacc. & Trott.; Saccardo, Syll. Fung. **21**: 276. 1912.

LUZON: Province of Rizal, Bosoboso, July, 1908, *M. Ramos, Bur. Sci. 1198*, on dead *Calophyllum inophyllum*.

This fungus seems to have the characters of the genus *Polystictus* rather than of *Polyporus*.

Collected only in the Philippines.

POLYSTICTUS SUBCROCATUS (Murr.) Sacc. & Trott.; Saccardo, Syll. Fung. **21**: 224. 1912.

*Coriolopsis subcrocata* Murr. Bull. Torrey Club **35**: 394. 1908.

LUZON: Province of Rizal, July, 1907, *M. Ramos, Bur. Sci. 1859, 1864.*

As yet collected only in the Philippine Islands.

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